INDEX TO VOLUME 38

An asterisk (*) denotes the abstract of a paper presented before the Academy or an affiliated society.

PROCEEDINGS OF THE ACADEMY AND AFFILIATED SOCIETIES

Anthropological Society of Washington. 191.
Philosophical Society of Washington. 25, 283.
Washington Academy of Sciences. 23, 79, 112, 188, 213, 254, 281, 382.

AUTHOR INDEX

ABELSON, P. H. *The transuranic elements. 30.
ALEXANDER, S. N. *High-speed digital computing machines, Pt. 2. 26.
ALPHER, RALPH E. *The origin of chemical elements. 288.
AVERY, W. H. *Infrared spectra at low temperatures. 31.
BARTSCH, PAUL. More about Mexican urocoptid mollusks. 350.
BATES, ROGER G., and SMITH, EDGAR REYNOLDS. Standardization of the *p*H scale. 61.
BAYER, FREDERICK M. See CLARK, AUSTIN H. 143.
BEEBE, RALPH A. Dr. Stephen Brunauer's contributions in the field of adsorption. 117.
BENNETT, A. H. *The phase contrast microscope. 30.
BITANCOURT, A. A. See JENKINS, ANNA E. 362.
BLACKWELDER, RICHARD E. An analysis of specific homonyms in zoological nomenclature. 206.
———. The principle of priority in biological nomenclature. 306.
BLAKE, DORIS H. New species of *Metachroma* and other chrysomelid beetles from the West Indies. 274.
BRICKER, C. E. See FURMAN, N. HOWELL. 159.
BRIDGMAN, PERCY W. General survey of certain results in the field of high pressure physics. 145.
———. Science and freedom: Reflections of a physicist. 156.
BURINGTON, RICHARD STEVENS. The role of the concept of equivalence in the study of physical and mathematical systems. 1.
CALDWELL, JOSEPH R. Palachacolas Town, Hampton County, South Carolina. 321.
CLARK, AUSTIN H. Some interesting starfishes and brittle-stars dredged by the *Atlantis* in the mid-Atlantic. 75.
——— and BAYER, FREDERICK M. Some echinoderms from Biak, Schouten Islands. 143
COCHRAN, DORIS M. A new subspecies of tree frog from Pernambuco, Brazil. 316.
CONDON, E. U. *Nuclear forces. 283.
CURTIN, CHARLES B. The tardigrade fauna of the District of Columbia. 251.
CURTISS, J. H. *High-speed digital computing machines, Pt. 1. 26.
DAHL, A. I. *Temperature measurements in gas streams. 283.
DEFANDORF, F. M. The measurement of high voltage. 33.
DEIGNAN, H. G. Continental races of the bulbul *Pycnonotus dispar* (Horsfield). 245.
———. Some races of the babbling thrush, *Malacocincla abbotti* Blyth. 184.
———. The races of the black-throated sunbird, *Aethopyga saturata* (Hodgson). 21.
———. The races of the red-whiskered bulbul, *Pycnonotus jocosus* (Linnaeus). 279.
———. The races of the silver-breasted broadbill, *Serilophus lunatus* (Gould). 108.
DELACOUR, J. Note on the races of the black-throated sunbird, *Aethopyga saturata* (Hodgson). 183.
DEXTER, RALPH W. See SPECK, FRANK G. 257.
DRUCKER, PHILIP. The antiquity of the Northwest coast totem pole. 389.
DUFFENDACK, O. S. *Magnetic ferrites. 288.
DUNKLE, DAVID H. An interesting occurrence of fossil tracks in West Virginia. 130.
———. On two previously unreported selachians from the Upper Cretaceous of North America. 173.
DURYEE, W. R. *A film on the mechanism of cell division. 31.
ELLIOTT, EUGENE W. The swarm-cells of Myxomycetes. 133.
EWERS, JOHN C. Self-torture in the Blood Indian sun dance. 166.
FANG, WEN-PEI. New species of *Salix* from Szechwan, China. 312.
FANO, U. *Contributions of physics to biology, Pt. 1. 29.
FORBUSH, S. E. *Cosmic rays from the sun? 30.
FOX, RICHARD M. Two new Ithomiinae in the Schaus collection (Lepidoptera: Nymphalidae). 315.
FRIEDMANN, HERBERT. A small collection of birds from Eritrea. 137.
FURMAN, N. HOWELL; BRICKER, C. E.; and McDUFFIE, BRUCE. A method for the determination of certain metals present in minor concentration in various substances. 159.
GAHAN, A. B. The Herbert H. Smith collection of South American Chalcidoidea described by W. H. Ashmead. 243.
GAMOW, G. *Contributions of physics to biology, Pt. 2. 29.
GINNINGS, D. C. *The Bunsen ice calorimeter in modern heat measurements. 283.
GOGGIN, JOHN M. Florida archeology and recent ecological changes. 225.

GREEN, J. B. *The spectra of atoms. 285.
HERMANN, FREDERICK J. Notes on North American Leguminosae. 236.
———. Studies in *Lonchocarpus* and related genera, II: Miscellaneous Middle American Lonchocarpi. 11.
———. Studies in *Lonchocarpus* and related genera, III: *Humboldtiella* and *Callistylon*. 72.
———. Studies in *Lonchocarpus* and related genera, IV: The *Lonchocarpus rugosus* complex and additional Middle American species. 310.
HOBBS, HORTON H., Jr. On the crayfishes of the *Limosus* section of the genus *Orconectes* (Decapoda: Astacidae). 14.
HOFF, C. CLAYTON. *Hesperochernes thomomysi*, a new species of chernetid pseudoscorpion from California. 340.
HOFFMAN, JAMES I. Purification of uranium oxide. 233.
———. See also MAY, IRVING. 329.
HOFFMAN, RICHARD L. Three new eastern millipeds of the family Xystodesmidae. 346.
——— and KLEINPETER, HUBERT I. A collection of salamanders from Mount Rogers, Virginia. 106.
HUBBARD, JOHN C. *Ultrasonic propagation and its measurement. 287.
HUMPHREYS, W. J. Loose usage of weather words. 123.
ILLG, PAUL L. Pharodinae, a new subfamily of Chondracanthidae (Crustacea: Copepoda), and a description of *Pharodes biakensis*, n. sp., from New Guinea. 404.
JENKINS, ANNA E., and BITANCOURT, A. A. Diagnosis of the *Elsinoë* on flowering dogwood. 362.
KELLER, E. *Airborne magnetometer in geophysical explorations, Pt. 2. 28.
KLAASSE, JAMES M. *Airborne magnetometer in geophysical exploration, Pt. 1. 28.
KLEINPETER, HUBERT I. See HOFFMAN, RICHARD L. 106.
LARSEN, ESTHER L. New species of *Achaetogeron* (Compositae) from Mexico. 199.
LITTLE, ELBERT L., Jr. *Heliopsis longipes*, a Mexican insecticidal plant species. 269.
———. New species of trees from Ecuador. 87.
LOOMIS, H. F. Two new millipeds of Jamaica. 185.
LUTMAN, BENJAMIN FRANKLIN, and WHEELER, HARRY E. *Bacillus megaterium* de Bary from the interior of healthy potato tubers. 336.
MARTIN, G. W. Two new species of *Physarum*. 238.
MAY, IRVING, and HOFFMAN, JAMES I. A study of dithizone as a reagent for indium. 329.
McDUFFIE, BRUCE. See FURMAN, N. HOWELL. 159.
McMILLAN, J. HOWARD. *Spark shadowgraphy in hydrodynamics. 284.
MENZEL, D. H. *Problems of the sun. 32.
MILLER, CARL F. Early cultural manifestations exposed by the archeological survey of the Buggs Island Reservoir in southern Virginia and northern North Carolina. 397.
MILLIGAN, L. H. Robert Hamilton Lombard (obituary). 112.
MITTLEMAN, M. B. American Caudata, V: Notes on certain Appalachian salamanders of the genus *Plethodon*. 416.
——— and SMITH, HOBART M. American Caudata, IV: Allocation of the name *Bolitoglossa mexicana*. 318.
MOHLER, FRED L. Mass spectra of hydrocarbons. 193.
NEWELL, H. E. *Exploration of the upper atmosphere by rockets, Pt. 2. 28.
NIGGLI, PAUL. Some aspects of the geology, petrology, and mineralogy of Switzerland. 289.
PETERSON, R. P. *Exploration of the upper atmosphere by rockets, Pt. 1. 27.
PETTIBONE, MARIAN H. Two new species of polychaete worms of the family Polynoidae from Puget Sound and San Juan Archipelago. 412.
RICHARDS, O. W. *Applications of the phase contrast microscope. 30.
RICHARDS, RALPH W. George Rogers Mansfield (obituary). 223.
ROSS, HERBERT H. Notes and descriptions of Nearctic Hydroptilidae (Trichoptera). 201.
SABROSKY, CURTIS W. A synopsis of the Nearctic species of *Elachiptera* and related genera (Diptera, Chloropidae). 365.
SAYLOR, LAWRENCE W. Synoptic revision of the United States scarab beetles of the subfamily Dynastinae, No. 4: Tribes Oryctini (part), Dynastini, and Phileurini. 176.
———. Synoptic revision of the United States scarab beetles of the subfamily Dynastinae, No. 5: Keys to tribes and genera. 240.
SCHULTZ, LEONARD P., and WOODS, LOREN P. *Acanthurus triostegus marquesensis*, a new subspecies of surgeonfish, family Acanthuridae, with notes on related forms. 248.
———. A new name for *Synchiropus altivelis* Regan, with a key to the genera of the fish family Callionymidae. 419.
SEEGER, R. J. *Shock-wave phenomena. 26.
SEITZ, FREDERICK. *The theory of plastic flow in solids. 286.
SILVERMAN, SHIRLEIGH. *A cinema-spectrograph for photographing rapid spectral sequences. 285.
SIMMONS, PEREZ. English-language surnames of biological origin. 81.
SIMON, LESLIE E. *Organization and administration of German research in World War II. 287.
SMITH, EDGAR REYNOLDS. See BATES, ROGER G. 61.
SMITH, HOBART M. See MITTLEMAN, M. B. 318.
SMITH, NEWBORN. *Longitude effect in F2-layer characteristics. 25.

SOLECKI, RALPH S. A seventeenth-century fireplace at Maspeth, Long Island. 324.
SPECK, FRANK G., and DEXTER, RALPH W. Utilization of marine life by the Wampanoag Indians of Massachusetts. 257.
STEWART, T. D. The true form of the cranial deformity originally described under the name "tête trilobée." 66.
STONE, ALAN. *Simulium virgatum* Coquillett and a new related species (Diptera: Simuliidae). 399.
STRONG, JOHN. *An extension of the application of evaporated films. 286.
SUMNER, JAMES BATCHELLER. The chemical nature of enzymes. 113.
VINAL, GEORGE W. Transition from international to absolute electrical units as it affects the physical chemist. 265.
WACKER, PAUL F. *Heat capacities of gases. 31.
WELLS, H. W. *Panoramic ionospheric recorder. 25.
WEYL, F. J. *Optical analysis of supersonic flow. 27.
WHEELER, HARRY E. See LUTMAN, BENJAMIN FRANKLIN. 336.
WILLIAMS, ROBLEY C. *Recent developments in electron microscopy. 283.
WOODBRIDGE, HENSLEY C. Glossary of names used in colonial Latin America for crosses among Indians, Negroes, and Whites. 353.
WOODS, LOREN P. See SCHULTZ, LEONARD P. 248.

SUBJECT INDEX

Academy awards for scientific achievement, 1947. 255.
Anthropology. Glossary of names used in colonial Latin America for crosses among Indians, Negroes, and Whites. HENSLEY C. WOODBRIDGE. 353.
The true form of the cranial deformity originally described under the name "tête trilobée." T. D. STEWART. 66.
Archeology. A seventeenth-century fireplace at Maspeth, Long Island. RALPH S. SOLECKI. 324.
Early cultural manifestations exposed by the archeological survey of the Buggs Island Reservoir in southern Virginia and northern North Carolina. CARL F. MILLER. 397.
Florida archeology and recent ecological changes. JOHN M. GOGGIN. 225.
Palachacolas Town, Hampton County, South Carolina. JOSEPH R. CALDWELL. 321.
Astronomy. *Problems of the sun. D. H. MENZEL. 32.
Biochemistry. The chemical nature of enzymes. JAMES BATCHELLER SUMNER. 113.
Biology. The principle of priority in biological nomenclature. RICHARD E. BLACKWELDER. 306.
Biophysics. *A film on the mechanism of cell division. W. R. DURYEE. 31.
*Contributions of physics to biology, Pt. 1. U. FANO. 29.
*Contributions of physics to biology, Pt. 2. G. GAMOW. 29.
Botany. Diagnosis of the *Elsinoë* on flowering dogwood. ANNA E. JENKINS and A. A. BITANCOURT. 362.
Heliopsis longipes, a Mexican insecticidal plant species. ELBERT L. LITTLE, Jr. 269.
Botany. New species of *Achaetogeron* (Compositae) from Mexico. ESTHER L. LARSEN. 199.
New species of *Salix* from Szechwan, China. WEN-PEI FANG. 312.
New species of trees from western Ecuador. ELBERT L. LITTLE, JR. 87.
Notes in North American Leguminosae. FREDERICK J. HERMANN. 236.
Studies in *Lonchocarpus* and related genera, II: Miscellaneous Middle American Lonchocarpi. FREDERICK J. HERMANN. 11.
Studies in *Lonchocarpus* and related genera, III: *Humboldtiella* and *Callistylon*. FREDERICK J. HERMANN. 72.
Studies in *Lonchocarpus* and related genera, IV: The *Lonchocarpus rugosus* complex and additional Middle American species. FREDERICK J. HERMANN. 310.
Chemistry. A method for the determination of certain metals present in minor concentration in various substances. N. HOWELL FURMAN, C. E. BRICKER, and BRUCE McDUFFIE. 159.
A study of dithizone as a reagent for indium. IRVING MAY and JAMES I. HOFFMAN. 329.
Dr. Stephen Brunauer's contributions in the field of adsorption. RALPH A. BEEBE. 117.
Purification of uranium oxide. JAMES I. HOFFMAN. 233.
Standardization of the *p*H scale. ROGER G. BATES and EDGAR REYNOLDS SMITH. 61.
*The transuranic elements. P. H. ABELSON. 30.
Entomology. A synopsis of the Nearctic species of *Elachiptera* and related genera (Diptera, Chloropidae). CURTIS W. SABROSKY. 365.
Entomology. New species of *Metachroma* and other chrysomelid beetles from the West Indies. DORIS H. BLAKE. 274.
Notes and descriptions of Nearctic Hydroptilidae (Trichoptera). HERBERT H. ROSS. 201.
Simulium virgatum Coquillett and a new related species (Diptera: Simuliidae). ALAN STONE. 399.
Synoptic revision of the United States

scarab beetles of the subfamily Dynastinae, No. 4: Tribes Oryctini (part), Dynastini, and Phileurini. LAWRENCE W. SAYLOR. 176.

Synoptic revision of the United States scarab beetles of the subfamily Dynastinae, No. 5: Keys to tribes and genera. LAWRENCE W. SAYLOR. 240.

The Herbert H. Smith collection of South American Chalcidoidea described by W. H. Ashmead. A. B. GAHAN. 243.

Two new Ithomiinae in the Schaus collection (Lepidoptera: Nymphalidae). RICHARD M. FOX. 315.

Ethnology. Self-torture in the Blood Indian sun dance. JOHN C. EWERS. 166.

The antiquity of the Northwest coast totem pole. PHILIP DRUCKER. 389.

Utilization of marine life by the Wampanoag Indians of Massachusetts. FRANK G. SPECK and RALPH W. DEXTER. 257.

General science. *Organization and administration of German research in World War II. LESLIE E. SIMON. 287.

Science and freedom: Reflections of a physicist. PERCY W. BRIDGMAN. 156.

Geology. Some aspects of the geology, petrology, and mineralogy of Switzerland. PAUL NIGGLI. 289.

Herpetology. A collection of salamanders from Mount Rogers, Virginia. RICHARD L. HOFFMAN and HUBERT I. KLEINPETER. 106.

Ichthyology. *Acanthurus triostegus marquesensis*, a new subspecies of surgeonfish, family Acanthuridae, with notes on related forms. LEONARD P. SCHULTZ and LOREN P. WOODS. 248.

A new name for *Synchiropus altivelis* Regan, with a key to the genera of the fish family Callionymidae. LEONARD P. SCHULTZ and LOREN P. WOODS. 419.

Mathematics. The role of the concept of equivalence in the study of physical and mathematical systems. RICHARD STEVENS BURINGTON. 1.

Meteorology. Loose usage of weather words. W. J. HUMPHREYS. 123.

Mycology. The swarm-cells of Myxomycetes. EUGENE W. ELLIOTT. 133.

Two new species of *Physarum*. G. W. MARTIN. 238.

Obituaries.

HARRY DIAMOND. 320.

ROBERT HAMILTON LOMBARD. 112.

GEORGE ROGERS MANSFIELD. 223.

Ornithology. A small collection of birds from Eritrea. HERBERT FRIEDMANN. 137.

Continental races of the bulbul *Pycnonotus dispar* (Horsfield). H. G. DEIGNAN. 245.

Note on the races of the black-throated sunbird, *Aethopyga saturata* (Hodgson). J. DELACOUR. 183.

Some races of the babbling thrush, *Malacocincla abbotti* Blyth. H. G. DEIGNAN. 184.

The races of the black-throated sunbird, *Aethopyga saturata* (Hodgson). H. G. DEIGNAN. 21.

The races of the red-whiskered bulbul, *Pycnonotus jocosus* (Linnaeus). H. G. DEIGNAN. 279.

The races of the silver-breasted broadbill, *Serilophus lunatus* (Gould). H. G. DEIGNAN. 108.

Paleontology. An interesting occurrence of fossil tracks in West Virginia. DAVID H. DUNKLE. 130.

On two previously unreported selachians from the Upper Cretaceous of North America. DAVID H. DUNKLE. 173.

Philology. English-language surnames of biological origin. PEREZ SIMMONS. 81.

Physics. *A cinema-spectrograph for photographing rapid spectral sequences. SHIRLEIGH SILVERMAN. 285.

*Airborne magnetometer in geophysical exploration, Pt. 1. JAMES M. KLAASSE. 28.

*Airborne magnetometer in geophysical explorations, Pt. 2. F. KELLER. 28.

*An extension of the application of evaporated films. JOHN STRONG. 286.

*Applications of the phase contrast microscope. O. W. RICHARDS. 30.

*Cosmic rays from the sun? S. E. FORBUSH. 30.

*Exploration of the upper atmosphere by rockets, Pt. 1. R. P. PETERSON. 27.

*Exploration of the upper atmosphere by rockets, Pt. 2. H. E. NEWELL. 28.

General survey of certain results in the field of high pressure physics. PERCY W. BRIDGMAN. 145.

*Heat capacities of gases. PAUL F. WACKER. 31.

*High-speed digital computing machines, Pt. 1. J. H. CURTISS. 26.

*High-speed digital computing machines, Pt. 2. S. N. ALEXANDER. 26.

*Infrared spectra at low temperatures. W. H. AVERY. 31.

*Longitude effect in F2-layer characteristics. NEWBORN SMITH. 25.

*Magnetic ferrites. O. S. DUFFENDACK. 288.

Mass spectra of hydrocarbons. FRED L. MOHLER. 193.

*Nuclear forces. E. U. CONDON. 283.

*Optical analysis of supersonic flow. F. J. WEYL. 27.

Physics. *Panoramic ionospheric recorder. H. W. WELLS. 25.

*Recent developments in electron microscopy. ROBLEY C. WILLIAMS. 283.

*Shock-wave phenomena. R. J. SEEGER. 26.

*Spark shadowgraphy in hydrodynamics. J. HOWARD MCMILLAN. 284.

*Temperature measurements in gas streams. A. I. DAHL. 283.
*The Bunsen ice calorimeter in modern heat measurements. D. C. GINNINGS. 283.
The measurement of high voltage. F. M. DEFANDORF. 33.
*The origin of chemical elements. RALPH E. ALPHER. 288.
*The phase contrast microscope. A. H. BENNETT. 30.
*The spectra of atoms. J. B. GREEN. 285.
*The theory of plastic flow in solids. FREDERICK SEITZ. 286.
Transition from international to absolute electrical units as it affects the physical chemist. GEORGE W. VINAL. 265.
*Ultrasonic propagation and its measurement. JOHN C. HUBBARD. 287.
Plant pathology. *Bacillus megaterium* de Bary from the interior of healthy potato tuber. BENJAMIN FRANKLIN LUTMAN and HARRY E. WHEELER. 336.
Zoology. American Caudata, IV: Allocation of the name *Bolitoglossa mexicana*. M. B. MITTLEMAN and HOBART M. SMITH. 318.
American Caudata, V: Notes on certain Appalachian salamanders of the genus *Plethodon*. M. B. MITTLEMAN. 416.
Zoology. An analysis of specific homonyms in zoological nomenclature. RICHARD E. BLACKWELDER. 206.
A new subspecies of tree frog from Pernambuco, Brazil. DORIS M. COCHRAN. 316.
Hesperochernes thomomysi, a new species of chernetid pseudoscorpion from California. C. CLAYTON HOFF. 340.
More about Mexican urocoptid mollusks. PAUL BARTSCH. 350.
On the crayfishes of the *Limosus* section of the genus *Orconectes* (Decapoda: Astacidae). HORTON H. HOBBS, JR. 14.
Pharodinae, a new subfamily of Chondracanthidae (Crustacea: Copepoda), and a description of *Pharodes biakensis*, n. sp., from New Guinea. PAUL L. ILLG. 404.
Some echinoderms from Biak, Schouten Islands. AUSTIN H. CLARK and FREDERICK M. BAYER. 143.
Some interesting starfishes and brittle-stars dredged by the *Atlantis* in the mid-Atlantic. AUSTIN H. CLARK. 75.
The tardigrade fauna of the District of Columbia. CHARLES B. CURTIN. 251.
Three new eastern millipeds of the family Xystodesmidae. RICHARD L. HOFFMAN. 346.
Two new millipeds of Jamaica. H. F. LOOMIS. 185.
Two new species of polychaete worms of the family Polynoidae from Puget Sound and San Juan Archipelago. MARIAN H. PETTIBONE. 412.